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AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/334,193 06/16/99 O'SHAUGHNESSY

D 1375P1

EXAMINER

024959  
PPG INDUSTRIES INC  
INTELLECTUAL PROPERTY DEPT  
ONE PPG PLACE  
PITTSBURGH PA 15272

IM52/0910

MCNEIL, J  
ART UNIT PAPER NUMBER

1775  
DATE MAILED:

10  
09/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/334,193

Applicant(s)  
O'Shaughnessy, Dennis J

Examiner  
Jennifer McNeil

Art Unit  
1775



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on Jun 15, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 1-34 and 36-43 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-34 and 36-43 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8

20) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 23, 26, 29, and 36 use improper alternative language, specifically in reference to the protective layer groupings. See MPEP 2173.05(h). It is not clear what the choices are for the two films which make up the protective layer.

It is not clear where the protective layer is found with reference to the other layers. Please clarify.

Also in these claims, is the "zinc oxide, tin oxide film" a film made of both Zn and Ti oxides, or is this an alternative grouping? The same phrase is found in claim 2.

In claim 4, line 8, change "a" to --an--.

Claim 6, lines 7 and 13, please delete "including".

Claim 8, line 14, should it be --the *second* dielectric layer deposited over the first metal primer layer--? And is this a redundant statement over the first line of that paragraph?

Claim 22 uses improper alternative language. See MPEP 2173.05(h).

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Claim 30-34 are not dependent upon any independent claims. For the purposes of examination, they have been deemed as dependent from claim 29.

In claim 37, lines 5-6, should the second infrared reflective layer be over the first dielectric layer and not the second dielectric layer? Please clarify.

Claims 38 and 39 are duplicates. Please amend or cancel one of the claims.

Claims 40 and 41 recite the limitation "the second dielectric layer" in lines 3 and 4, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 41 is confusing. What order is supposed to be followed by the films?

Claim 36 refers to a protective layer which may be a metal. Is this just a primer layer?

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 36, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Finley et al (US 5,059,295). Finley teaches a multiple-layer coated article with layers in the following order and beginning with a glass substrate, a dielectric layer of mixed tin and zinc oxides, a layer of titanium, a layer of silver, another layer of titanium, a layer of mixed tin and zinc oxides, and

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finally a layer of titanium oxide. The titanium layer between the first and second dielectrics serves as the heat convertible metal protective layer.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Finley et al (US 5,059,295) in view of Arbab et al (EP 0803481A2). Finley et al teach the low emissivity window stack as discussed above but do not include additional dielectric and infrared reflective layers.

Arbab et al teach high transmittance, low emissivity coated articles and include multiple dielectric and infrared reflective layers in the stack, referred to as double stacks. This results in an article with an improved shelf-life. As it is shown by Arbab et al that stacks having multiple dielectric and infrared reflective layers are well known in the art, it would have been obvious to one of ordinary skill in the art to provide Finley et al with additional layers to provide an article with improved shelf-life.

***Allowable Subject Matter***

7. Claims 1-34, 42, and 43 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

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***Response to Arguments***

8. Applicant's arguments with respect to claims 36-41 have been considered but are moot in view of the new ground(s) of rejection.

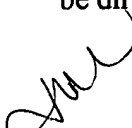
***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is (703) 305-0553. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822.

When filing a fax in Group 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for this Group are (703) 305-3599 for "Official" faxes and (703) 3055436 for "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

  
Jennifer McNeil  
Patent Examiner  
AU 1775

  
DEBORAH JONES  
SUPERVISORY PATENT EXAMINER